

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4, 6-13 and 15-18 are pending in the present application. Claims 1 and 10 are amended by the present amendment.

In the outstanding Office Action, Claims 1, 2, 6, 8-11, 15, 17, and 18 were rejected under 35 U.S.C. § 102(a) as anticipated by Watanabe (JP 2001-13856); Claims 1-2, 6, 8, 10, 11, 15, and 17 were rejected under 35 U.S.C. § 102(b) as anticipated by Ichikawa (JP 04-337750); Claims 3, 4, 12, and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Watanabe in view of U.S. Patent No. 5,185,629 to Iino et al. (herein “Iino”); and Claims 7 and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Watanabe in view of U.S. Patent No. 5,510,827 to Kubota.

Initially, applicants’ representative thanks Examiner Pham for a brief phone conversation on April 6, 2004 during which the Examiner indicated that the rejection against Watanabe should be interpreted as under 35 U.S.C. § 102(a) instead of under 35 U.S.C. § 102(e) as written in the outstanding Office Action. Accordingly, that interpretation is followed in this response.

Claims 1, 2, 6, 8-11, 15, 17, and 18 were rejected under 35 U.S.C. § 102(a) as anticipated by Watanabe. Applicants respectfully traverse that rejection.

Amended Claim 1 is directed to an image forming apparatus that includes a writing device including scanning optical components configured to write and form an image on a surface of an image bearing member. The image forming apparatus also includes a developing device configured to develop the image formed on the surface of the image bearing member, an upper duct provided above and a lower duct provided beneath a housing of the writing device to form an outside-air flowing path, and a single air intake fan

configured to take outside-air into the upper duct and the lower duct. Amended independent Claim 10 includes similar features.

In a non-limiting example, Figures 1-3 illustrate the main body of an image forming apparatus 10 that includes a writing device 16 configured to form an image on a surface of an image bearing member 11. In the illustrated embodiment, the writing device 16 includes scanning optical components, such as light source 40, polygon mirror 41, fθ lens 43 and mirror 44. The image forming apparatus 10 of this example includes an upper duct 50 above a housing 46 of the writing device 16 and includes a lower duct 52 beneath the housing 46 of the writing device 16. In addition, in this example, a single air intake fan 60 takes outside air into the upper duct 50 through upper connection opening 54 and the single air intake fan 60 also takes outside air into the lower duct 52 through lower connection opening 64.

An image forming apparatus in this configuration advantageously protects the scanning optical components, such as the fθ lens and mirror, from thermal expansion.¹

Applicants respectfully submit that Watanabe does not describe an upper duct provided above a housing of a writing device that includes scanning optical components. Watanabe describes only upper duct 38a and lower duct 38b both of which are located beneath the scanning optical components 6, 31, and 32.² Accordingly, it is respectfully submitted that Watanabe does not teach or suggest “a writing device including scanning optical components” and “an upper duct provided above . . . a housing of the writing device,” as in the independent claims.

Accordingly, it is respectfully submitted that independent Claims 1 and 10, and claims depending therefrom, patentably define over Watanabe.

¹ Specification at page 2, lines 13-17.

² Watanabe at Figures 1 and 2.

Claims 1-2, 6, 8, 10, 11, 15, and 17 were rejected under 35 U.S.C. § 102(b) as anticipated by Ichikawa. Applicants respectfully traverse that rejection.

Ichikawa does not disclose an upper duct above or a lower duct beneath a writing device that includes scanning optical components. Ichikawa shows only a lower duct 22, side duct 30, front side suction duct 35, and air-blowing fan 24 configured to reduce heat around a fixing device 15.³ However, Ichikawa does not disclose ducts above or beneath a writing device with scanning optical components, and does not appear to disclose any scanning optical components at all. Accordingly, Ichikawa does not teach or suggest “a writing device including scanning optical components” and “an upper duct provided above . . . a housing of the writing device,” as in the independent claims.

Accordingly, it is respectfully submitted that independent Claims 1 and 10, and claims depending therefrom, also patentably define over Ichikawa.

Claims 3, 4, 12, and 13 were rejected as unpatentable over Watanabe in view of Iino, and Claims 7 and 16 were rejected as unpatentable over Watanabe in view of Kubota. Applicants respectfully traverse those rejections.

Claims 3, 4, and 7 depend from Claim 1 and Claims 12, 13, and 16 depend from Claim 10, and as discussed above Claims 1 and 10 are believed to patentably define over Watanabe. Further, it is respectfully submitted that Iino and Kubota also do not teach or suggest the features of the independent claims.

Accordingly, it is respectfully submitted that independent Claims 1 and 10, and claims depending therefrom, are allowable.

³ Ichikawa at Figures 1-5.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER, & NEUSTADT, P.C.

Customer Number

22850



Gregory J. Maier
Attorney of Record
Registration No.: 25,599

Surinder Sachar
Registration No.: 34,423

Tel.: (703) 413-3000
Fax: (703) 413-2220
GJM/SS/ZSS/dnf

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